



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: El-Sherbeini, Mohamed

Serial No. 10/089,787

Art Unit: 1645

Filed: April 3, 2002

Examiner: Devi, S.

For: MraY Gene and Enzyme Pseudomonas Aeruginosa

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR 1.97

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Sir:

1. In compliance with 37 C.F.R. 1.97, submitted on the attached form herewith is a list of patents, publications or other information which are requested to be made of record in this application. This Information Disclosure Statement is not an admission that any patent, publication or other information referred to herein is "prior art" for this invention. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b).

2. In accordance with 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

3. Applicants respectfully request that the Examiner initial the attached form after reviewing the pertinence of each reference.

4. Pursuant to the waiver by the Office of the requirement under 37 CFR 1.98 (a)(2)(i) dated July 11, 2003, if the filing date of this application is after June 30, 2003, copies of each cited U.S. patent and each U.S. patent application publication are not enclosed herewith.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on the date appearing below.

MERCK & CO., INC.

By 

Date

10/8/03

**INFORMATION DISCLOSURE STATEMENT**

5. Pursuant to 37 C.F.R. 1.98(d), copies of references listed on the attached form that were submitted to or cited by the Office in a related application upon which the instant application relies for an earlier filing date under 35 U.S.C. 120 are not enclosed. Related application(s) in which references were submitted to or cited by the Office are as follows:

RELATED APPLICATION		
U. S. SERIAL NUMBER	FILING DATE	MERCK CASE

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6. In accordance with 37 C.F.R. 1.97, (check one)

- ☐ the attached information is filed within three months of the filing date of the captioned case.
- ☒ the attached information is filed more than three months after the filing date but prior to the mailing of a first Office Action on the merits.
- ☐ the attached information is being filed more than three months after the filing date and after the mailing of a first Office Action on the merits, but before the mailing date of a Final Action or Notice of Allowance. The enclosed authorization is therefore given to charge Deposit Account No. 13-2755 for the fee required under 37 C.F.R. 1.17(p).
- ☐ the undersigned certifies that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
- ☐ the undersigned certifies that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated under 37 C.F.R. 1.56(c) more than three months prior to the filing of this Statement.

Respectfully submitted,

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 Date: October 8, 2003

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Application Number	10/089,787
Filing Date	April 3, 2002
First Named Inventor	El-Sherbeini, Mohamed
Group Art Unit	1645
Examiner Name	Devi, S.
Attorney Docket Number	20522P

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Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office	Number	Kind Code (if known)		
	A	PCT	WO 96/40893		Astra Aktiebolag	12/19/1996
	B	PCT	WO 01/70955		Elitra Pharmaceuticals, Inc.	09/27/2001
	C	PCT	WO 98/18931		Human Genome Sciences, Inc.	05/07/1998
	D	PCT	WO 99/61050		Merck & Co., Inc.	12/02/1999
	E	EPO	EP0 897 007		Smithkline Beecham Corporation	02/17/1999

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

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COMPLETE IF KNOWN

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NON PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
	A	Genbank Accession No. AB007500, Wada, A., et al. "Penicillin-binding protein 1 of Staphylococcus aureus is essential for growth".
	B	Genbank Accession No. AF034153, El-Sherbeini, M. et al. "Cloning and characterization of the Staphylococcus aureus mraY gene encoding Phospho-N-Acetylmuramoyl-Pentapeptide Translocase".
	C	Genbank Accession No. U94706, Pucci, M.J., et al. "Identification and characterization of cell wall-cell division gene clusters in pathogenic gram-positive cocci".
	D	Bouhss, Ahmed et al. "Topological analysis of the MraY protein catalysing the first membrane step of peptidoglycan synthesis". MOLECULAR MICROBIOLOGY, (1999), 34(3), PP. 576-585.
	E	Boyle, David et al. "mraY Is an Essential Gene for Cell Growth in Escherichia coli". JOURNAL OF BACTERIOLOGY, Dec. (1998), PP. 6429-6432.
	F	Azzolina, Barbara et al. "The Cell abd Cell Division Gene Cluster in the Mra Operon of Pseudomonas aeruginosa: Cloning, Production, and Purification of Active Enzymes". PROTEIN EXPRESSION AND PURIFICATION, (2001), 21, PP. 393-400.
	G	Brandish, Philip et al. "Slow Binding Inhibition of Phospho-N-acetylmuramyl-pentapeptide-translocase (Escherichia coli) by Mureidomycin A*". THE JOURNAL OF BIOLOGICAL CHEMISTRY, (1996), Vol. 271, No. 13, PP. 7609-7614.
	H	Bugg, T.D.H. et al. "Intracellular Steps of Bacterial Cell Wall Peptidoglycan Biosynthesis: Enzymology, Antibiotics, and Antibiotic Resistance". NATURAL PRODUCT REPORTS, (1992), PP. 199-215.
	I	El-Sherbeini, Mohamed et al. "Cloning and expression of Staphylococcus aureus and Streptococcus pyogenes murD genes encoding uridine diphosphate N-acetylmuramoyl-L-alanine:D-glutamate ligases". GENE, (1998), 210, PP. 117-125.
	J	Ikedo, Masato et al. "The Escherichia coli mraY Gene Encoding UDP-N-Acetylmuramoyl-Pentapeptide: Undecaprenyl-Phosphate Phospho-N-Acetylmuramoyl-Pentapeptide Transferase". JOURNAL OF BACTERIOLOGY, (1991), PP. 1021-1026.
	K	Inukai, Masatoshi et al. "Selective Inhibition of the Bacterial Translocase Reaction in Peptidoglycan Synthesis by Mureidomycins". ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1993), PP. 980-983.
	L	Liao, Xiaowen et al. "Physical mapping of 32 genetic markers on the Pseudomonas aeruginosa PAO1 chromosome". MICROBIOLOGY, (1996), 142, PP. 79-86.
	M	Pless, Dorothy D. et al. "Initial Membrane Reaction in Peptidoglycan Synthesis". THE JOURNAL OF BIOLOGICAL CHEMISTRY, (1973), Vol. 248, No. 5, PP. 1568-1576.
	N	Pucci, Michael et al. "Identification and Characterization of Cell Wall-Cell Division Gene Clusters in Pathogenic Gram-Positive Cocci". JOURNAL OF BACTERIOLOGY, (1997), PP. 5632-5635.
	O	"Biosynthesis of peptidoglycan". Microbial Cell Walls and Membranes, H.J. Rogers et al., eds. (London: Chapman and Hall), (1980), PP. 238-296.

Examiner Signature

Date Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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No.

Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.

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Schmidt, Karen et al. "Comparative Genome Mapping of *Pseudomonas aeruginosa* PAO with *P. aeruginosa* C, Which Belongs to a Major Clone in Cystic Fibrosis Patients and Aquatic Habitats". JOURNAL OF BACTERIOLOGY, (1996), PP. 85-93.

Stover, C.K. et al. "Complete genome sequence of *Pseudomonas aeruginosa* PA01, an opportunistic pathogen". NATURE, (2000), Vol. 406, PP. 959-964.

Wada, Akihito et al. "Penicillin-Binding Protein 1 of *Staphylococcus aureus* Is Essential for Growth". JOURNAL OF BACTERIOLOGY. (1998). PP. 2759-2765.

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